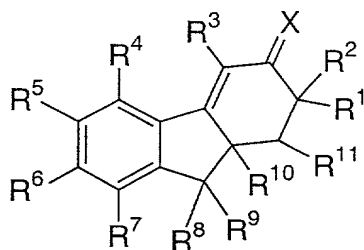


## WHAT IS CLAIMED IS:

1. A compound of the formula:



- 5 wherein X is selected from the group consisting of: O, N-OR<sup>a</sup>, N-NR<sup>a</sup>R<sup>b</sup> and C<sub>1-6</sub> alkylidene, wherein said alkylidene group is unsubstituted or substituted with a group selected from hydroxy, amino, O(C<sub>1-4</sub>alkyl), NH(C<sub>1-4</sub>alkyl), or N(C<sub>1-4</sub>alkyl)<sub>2</sub>;
- 10 R<sup>1</sup> is selected from the group consisting of hydrogen, C<sub>1-6</sub>alkyl, C<sub>2-6</sub>alkenyl, and C<sub>2-6</sub>alkynyl, wherein said alkyl, alkenyl and alkynyl groups are either unsubstituted or substituted with a group selected from OR<sup>c</sup>, SR<sup>c</sup>, NR<sup>b</sup>R<sup>c</sup>, C(=O)R<sup>c</sup>, C(=O)CH<sub>2</sub>OH, or phenyl, wherein said phenyl group can either be unsubstituted or substituted with 1-3 substituents independently selected from the group consisting of C<sub>1-4</sub>alkyl, OH, O(C<sub>1-4</sub>alkyl), NH<sub>2</sub>, NH(C<sub>1-4</sub>alkyl), NH(C<sub>1-4</sub>alkyl)<sub>2</sub>, halo, CN, NO<sub>2</sub>, CO<sub>2</sub>H, CO<sub>2</sub>(C<sub>1-4</sub>alkyl), C(O)H, and C(O)(C<sub>1-4</sub>alkyl);
- 15 R<sup>2</sup> is selected from the group consisting of hydrogen, hydroxy, iodo, O(C=O)R<sup>c</sup>, C(=O)R<sup>c</sup>, CO<sub>2</sub>R<sup>c</sup>, C<sub>1-6</sub>alkyl, C<sub>2-6</sub>alkenyl, and C<sub>2-6</sub>alkynyl, wherein said alkyl, alkenyl and alkynyl groups are either unsubstituted or substituted with a group selected from OR<sup>c</sup>, SR<sup>c</sup>, NR<sup>b</sup>R<sup>c</sup>, C(=O)R<sup>c</sup>, C(=O)CH<sub>2</sub>OH, or phenyl, wherein said phenyl group can either be unsubstituted or substituted with 1-3 substituents independently selected from the group consisting of C<sub>1-4</sub>alkyl, OH, O(C<sub>1-4</sub>alkyl), NH<sub>2</sub>, NH(C<sub>1-4</sub>alkyl), NH(C<sub>1-4</sub>alkyl)<sub>2</sub>, halo, CN, NO<sub>2</sub>, CO<sub>2</sub>H, CO<sub>2</sub>(C<sub>1-4</sub>alkyl), C(O)H, and C(O)(C<sub>1-4</sub>alkyl);
- 20 or R<sup>1</sup> and R<sup>2</sup>, when taken together with the carbon atom to which they are attached, form a carbonyl group;
- 25

- or R<sup>1</sup> and R<sup>2</sup>, when taken together, form a C<sub>1-6</sub> alkylidene group, wherein said alkylidene group is either unsubstituted or substituted with a group selected from the group consisting of hydroxy, O(C<sub>1-4</sub>alkyl), N(C<sub>1-4</sub>alkyl)<sub>2</sub>, and phenyl, wherein said phenyl group can either be unsubstituted or substituted with 1-3 substituents independently selected from the group consisting of C<sub>1-4</sub>alkyl, OH, O(C<sub>1-4</sub>alkyl), NH<sub>2</sub>, NH(C<sub>1-4</sub>alkyl), NH(C<sub>1-4</sub>alkyl)<sub>2</sub>, halo, CN, NO<sub>2</sub>, CO<sub>2</sub>H, CO<sub>2</sub>(C<sub>1-4</sub>alkyl), C(O)H, and C(O)(C<sub>1-4</sub>alkyl);
- R<sup>3</sup> is selected from the group consisting of hydrogen, fluoro, chloro, bromo, iodo, cyano, NR<sup>a</sup>R<sup>c</sup>, OR<sup>a</sup>, C(=O)R<sup>a</sup>, CO<sub>2</sub>R<sup>c</sup>, CONR<sup>a</sup>R<sup>c</sup>, SR<sup>a</sup>, S(=O)R<sup>a</sup>, SO<sub>2</sub>R<sup>a</sup>, C<sub>1-10</sub>alkyl, C<sub>2-10</sub>alkenyl, C<sub>2-10</sub>alkynyl, C<sub>3-7</sub>cycloalkyl, 4-7 membered heterocycloalkyl, cycloalkylalkyl, aryl, heteroaryl, arylalkyl, and heteroarylalkyl, wherein said alkyl, alkenyl, alkynyl, cycloalkyl, aryl and heteroaryl groups are either unsubstituted or independently substituted with 1, 2 or 3 groups selected from fluoro, chloro, bromo, iodo, cyano, OR<sup>a</sup>, NR<sup>a</sup>R<sup>c</sup>, O(C=O)R<sup>a</sup>, O(C=O)NR<sup>a</sup>R<sup>c</sup>, NR<sup>a</sup>(C=O)R<sup>c</sup>, NR<sup>a</sup>(C=O)OR<sup>c</sup>, C(=O)R<sup>a</sup>, CO<sub>2</sub>R<sup>a</sup>, CONR<sup>a</sup>R<sup>c</sup>, CSNR<sup>a</sup>R<sup>c</sup>, SR<sup>a</sup>, S(O)R<sup>a</sup>, SO<sub>2</sub>R<sup>a</sup>, SO<sub>2</sub>NR<sup>a</sup>R<sup>c</sup>, YR<sup>d</sup>, and ZYR<sup>d</sup>;
- R<sup>4</sup> is selected from the group consisting of hydrogen, hydroxy, amino, methyl, CF<sub>3</sub>, fluoro, chloro, and bromo;
- R<sup>5</sup> and R<sup>6</sup> are each independently selected from the group consisting of hydrogen, fluoro, chloro, bromo, methyl, amino, OR<sup>b</sup>, OR<sup>a</sup>, O(C=O)R<sup>c</sup>, O(C=O)OR<sup>c</sup>, and NH(C=O)R<sup>c</sup>;
- R<sup>7</sup> is selected from the group consisting of hydrogen, OR<sup>b</sup>, NR<sup>b</sup>R<sup>c</sup>, fluoro, chloro, bromo, iodo, cyano, nitro, C<sub>1-6</sub>alkyl, C<sub>2-6</sub>alkenyl, CF<sub>3</sub>, and CHF<sub>2</sub>;
- R<sup>8</sup> and R<sup>9</sup> are each independently selected from the group consisting of hydrogen, C<sub>1-6</sub>alkyl, C<sub>2-6</sub>alkenyl, and C<sub>2-6</sub>alkynyl, or R<sup>8</sup> and R<sup>9</sup>, when taken together with the carbon atom to which they are attached, form a 3-5 membered cycloalkyl ring, or R<sup>8</sup> and R<sup>9</sup>, when taken together with the carbon atom to which they are attached, form a carbonyl group;
- R<sup>10</sup> is selected from the group consisting of hydrogen, C<sub>1-10</sub>alkyl, C<sub>2-10</sub>alkenyl, C<sub>2-10</sub>alkynyl, C<sub>3-6</sub>cycloalkyl, cycloalkylalkyl, aryl, heteroaryl, arylalkyl, and heteroarylalkyl, wherein said alkyl, alkenyl, alkynyl, cycloalkyl,

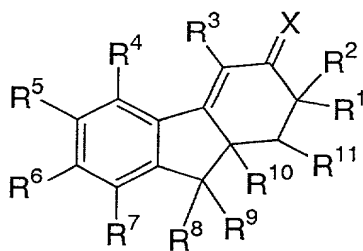
- cycloalkylalkyl, aryl, heteroaryl, arylalkyl and heteroarylalkyl groups can be optionally substituted with a group selected from chloro, bromo, iodo,  $\text{OR}^b$ ,  $\text{SR}^b$ ,  $\text{C(=O)R}^b$ , or 1-5 fluoro, or  $\text{R}^{10}$  and  $\text{R}^1$ , when taken together with the three intervening carbon atoms to which they are attached, form a 5-6 membered cycloalkyl ring which can be optionally substituted  $\text{C}_{1-6}$ alkyl;
- $\text{R}^{11}$  is selected from the group consisting of hydrogen and  $\text{C}_{1-4}$ alkyl;
- $\text{R}^a$  is selected from the group consisting of hydrogen,  $\text{C}_{1-10}$ alkyl, and phenyl, wherein said alkyl group can be optionally substituted with a group selected from hydroxy, amino,  $\text{O(C}_{1-4}\text{alkyl)}$ ,  $\text{NH(C}_{1-4}\text{alkyl)}$ ,  $\text{N(C}_{1-4}\text{alkyl})}_2$ , phenyl, or 1-5 fluoro, and wherein said phenyl groups can either be unsubstituted or substituted with 1-3 substituents independently selected from the group consisting of  $\text{C}_{1-4}$ alkyl, OH,  $\text{O(C}_{1-4}\text{alkyl)}$ ,  $\text{NH}_2$ ,  $\text{NH(C}_{1-4}\text{alkyl)}$ ,  $\text{NH(C}_{1-4}\text{alkyl})}_2$ , halo, CN,  $\text{NO}_2$ ,  $\text{CO}_2\text{H}$ ,  $\text{CO}_2(\text{C}_{1-4}\text{alkyl})$ ,  $\text{C(O)H}$ , and  $\text{C(O)(C}_{1-4}\text{alkyl})$ ;
- $\text{R}^b$  is selected from the group consisting of hydrogen,  $\text{C}_{1-10}$ alkyl, benzyl and phenyl, wherein said phenyl group can either be unsubstituted or substituted with 1-3 substituents independently selected from the group consisting of  $\text{C}_{1-4}$ alkyl, OH,  $\text{O(C}_{1-4}\text{alkyl)}$ ,  $\text{NH}_2$ ,  $\text{NH(C}_{1-4}\text{alkyl)}$ ,  $\text{NH(C}_{1-4}\text{alkyl})}_2$ , halo, CN,  $\text{NO}_2$ ,  $\text{CO}_2\text{H}$ ,  $\text{CO}_2(\text{C}_{1-4}\text{alkyl})$ ,  $\text{C(O)H}$ , and  $\text{C(O)(C}_{1-4}\text{alkyl})$ ;
- $\text{R}^c$  is selected from the group consisting of hydrogen,  $\text{C}_{1-10}$ alkyl and phenyl, wherein said phenyl group can either be unsubstituted or substituted with 1-3 substituents independently selected from the group consisting of  $\text{C}_{1-4}$ alkyl, OH,  $\text{O(C}_{1-4}\text{alkyl)}$ ,  $\text{NH}_2$ ,  $\text{NH(C}_{1-4}\text{alkyl)}$ ,  $\text{NH(C}_{1-4}\text{alkyl})}_2$ , halo, CN,  $\text{NO}_2$ ,  $\text{CO}_2\text{H}$ ,  $\text{CO}_2(\text{C}_{1-4}\text{alkyl})$ ,  $\text{C(O)H}$ , and  $\text{C(O)(C}_{1-4}\text{alkyl})$ ;
- or  $\text{R}^a$  and  $\text{R}^c$ , whether or not on the same atom, can be taken together with any attached and intervening atoms to form a 4-7 membered ring;
- $\text{R}^d$  is selected from the group consisting of  $\text{NR}^b\text{R}^c$ ,  $\text{OR}^a$ ,  $\text{CO}_2\text{R}^a$ ,  $\text{O(C=O)R}^a$ , CN,  $\text{NR}^c(\text{C=O)R}^b$ ,  $\text{CONR}^a\text{R}^c$ ,  $\text{SO}_2\text{NR}^a\text{R}^c$ , and a 4-7 membered N-heterocycloalkyl ring that can be optionally interrupted by O, S, NRC, or C=O;

Y is selected from the group consisting of  $\text{CR}^b\text{R}^c$ ,  $\text{C}_{2-6}$  alkylene and  $\text{C}_{2-6}$  alkenylene, wherein said alkylene and alkenylene linkers can be optionally interrupted by O, S, or  $\text{NR}^c$ ;

Z is selected from the group consisting of O, S,  $\text{NR}^c$ ,  $\text{C}=\text{O}$ ,  $\text{O}(\text{C}=\text{O})$ ,  $(\text{C}=\text{O})\text{O}$ ,  $\text{NR}^c(\text{C}=\text{O})$  or  $(\text{C}=\text{O})\text{NR}^c$ ;

and the pharmaceutically acceptable salts thereof.

2. A compound of the formula:



10 wherein X is selected from the group consisting of O and  $\text{N-OR}^a$ ;

$\text{R}^1$  is selected from the group consisting of hydrogen and  $\text{C}_{1-6}$ alkyl, wherein said alkyl group is either unsubstituted or substituted with a group selected from  $\text{OR}^c$  or  $\text{C}(\text{=O})\text{R}^c$ ;

15  $\text{R}^2$  is selected from the group consisting of hydrogen, hydroxy, iodo, and  $\text{C}_{1-6}$ alkyl, wherein said alkyl group is either unsubstituted or substituted with a group selected from  $\text{OR}^c$  or  $\text{C}(\text{=O})\text{R}^c$ ;

20  $\text{R}^3$  is selected from the group consisting of hydrogen, chloro, bromo, iodo, cyano,  $\text{C}_{1-10}$ alkyl,  $\text{C}_{2-10}$ alkenyl, aryl and heteroaryl, wherein said alkyl, alkenyl, aryl and heteroaryl groups are either unsubstituted or independently substituted with 1, 2 or 3 groups selected from fluoro, chloro, bromo, iodo, cyano,  $\text{OR}^a$ ,  $\text{NR}^a\text{R}^c$ ,  $\text{C}(\text{=O})\text{R}^a$ ,  $\text{CO}_2\text{R}^c$ ,  $\text{NR}^a\text{C}(\text{=O})\text{R}^c$ ,  $\text{CONR}^a\text{R}^c$ ,  $\text{CSNR}^a\text{R}^c$ ,  $\text{SR}^a$ ,  $\text{YR}^d$ , and  $\text{ZYR}^d$ ;

$\text{R}^4$  is selected from the group consisting of hydrogen, fluoro, hydroxy and methyl;

25  $\text{R}^5$  and  $\text{R}^6$  are each independently selected from the group consisting of hydrogen, fluoro,  $\text{O}(\text{C}=\text{O})\text{R}^c$  and  $\text{OR}^a$ ;

$\text{R}^7$  is selected from the group consisting of hydrogen,  $\text{NR}^b\text{R}^c$ , chloro, bromo, nitro and  $\text{C}_{1-6}$ alkyl;

- $R^8$  and  $R^9$  are each independently selected from the group consisting of hydrogen and  $C_{1-6}$ alkyl;  
 or  $R^8$  and  $R^9$ , when taken together with the carbon atom to which they are attached, form a carbonyl group;
- 5  $R^{10}$  is selected from the group consisting of hydrogen,  $C_{1-10}$ alkyl,  $C_{2-10}$ alkenyl,  $C_{3-6}$ cycloalkyl and cycloalkylalkyl, wherein said alkyl, alkenyl, cycloalkyl and cycloalkylalkyl groups can be optionally substituted with a group selected from  $OR^b$ ,  $SR^b$ ,  $C(=O)R^b$ , or 1-5 fluoro;  
 or  $R^{10}$  and  $R^1$ , when taken together with the three intervening carbon atoms to which they are attached, form a 5-6 membered cycloalkyl ring which can be optionally substituted  $C_{1-6}$ alkyl;
- 10  $R^{11}$  is selected from the group consisting of hydrogen and  $C_{1-4}$ alkyl;  
 $R^a$  is selected from the group consisting of hydrogen,  $C_{1-10}$ alkyl, and phenyl, wherein said alkyl group can be optionally substituted with a group selected from hydroxy, amino,  $O(C_{1-4}$ alkyl),  $NH(C_{1-4}$ alkyl),  $N(C_{1-4}$ alkyl)<sub>2</sub>, phenyl, or 1-5 fluoro;
- 15  $R^b$  is selected from the group consisting of hydrogen,  $C_{1-10}$ alkyl, benzyl and phenyl;  
 $R^c$  is selected from the group consisting of hydrogen and  $C_{1-10}$ alkyl and phenyl;  
 or  $R^a$  and  $R^c$ , whether or not on the same atom, can be taken together with any attached and intervening atoms to form a 4-7 membered ring;
- 20  $R^d$  is selected from the group consisting of  $NR^bR^c$ ,  $OR^a$ ,  $CO_2R^a$ ,  $O(C=O)R^a$ ,  $CN$ ,  $NR^c(C=O)R^b$ ,  $CONR^aR^c$ ,  $SO_2NR^aR^c$ , and a 4-7 membered N-heterocycloalkyl ring that can be optionally interrupted by O, S,  $NR^c$ , or  $C=O$ ;
- 25 Y is selected from the group consisting of  $CR^bR^c$ ,  $C_{2-6}$  alkylene and  $C_{2-6}$  alkenylene, wherein said alkylene and alkenylene linkers can be optionally interrupted by O, S, or  $NR^c$ ;
- Z is selected from the group consisting of O, S,  $NR^c$ ,  $C=O$ ,  $O(C=O)$ ,  $(C=O)O$ ,  $NR^c(C=O)$  or  $(C=O)NR^c$ ;
- 30 and the pharmaceutically acceptable salts thereof.

3. A compound according to Claim 2, wherein X is selected from the group consisting of O, N-OH and N-OCH<sub>3</sub>, and the pharmaceutically acceptable salts thereof.

4. A compound according to Claim 3, wherein R<sup>6</sup> is selected from the group consisting of OR<sup>a</sup> and O(C=O)R<sup>c</sup> and the pharmaceutically acceptable salts thereof.

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5. A compound according to Claim 4, wherein R<sup>3</sup> is selected from the group consisting of hydrogen, chloro, bromo, iodo, cyano, C<sub>1-10</sub>alkyl, aryl and heteroaryl, wherein said alkyl, aryl and heteroaryl groups are either unsubstituted or independently substituted with 1, 2 or 3 groups selected from fluoro, chloro, bromo, cyano, NR<sup>a</sup>R<sup>c</sup>, C(=O)R<sup>a</sup>, CO<sub>2</sub>R<sup>c</sup>, CONR<sup>a</sup>R<sup>c</sup>, SR<sup>a</sup>, YR<sup>d</sup>, and ZYR<sup>d</sup>, and the pharmaceutically acceptable salts thereof.

10

6. A compound according to Claim 1 selected from the group consisting of:

15

4-bromo-7-hydroxy-9a-methyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;

9a-butyl-7-hydroxy-4-methyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;

20

(3*E*)-9a-butyl-7-hydroxy-4-methyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one oxime;

9a-[(1*E*)-1-butenyl]-7-hydroxy-4-methyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;

4-bromo-9a-butyl-7-hydroxy-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;

25

4-bromo-9a-butyl-3-methylene-2,3,9,9a-tetrahydro-1*H*-fluoren-7-ol;

9a-butyl-4-cyano-7-hydroxy-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;

30

4-benzyl-9a-butyl-7-hydroxy-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;

9a butyl-7-hydroxy-4-(2-thienyl)-1,2,9,9a-tetrahydro-3*H*-fluoren-3-ene;

- 9a-butyl-7-hydroxy-4-{4-[2-(1-piperidinyl)ethoxy]phenyl}-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one hydrochloride;
- 5 9a-butyl-7-hydroxy-4-(4-hydroxyphenyl)-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- (2*E*)-3-[4-(9a-butyl-7-hydroxy-3-oxo-2,3,9,9a-tetrahydro-1*H*-fluoren-4-yl)phenyl]-2-propenoic acid;
- 10 9a-butyl-7-hydroxy-8-methyl-1,2,9,9a-3*H*-tetrahydro-fluoren-3-one;
- 4-bromo-9a-butyl-7-hydroxy-8-methyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 9a butyl-4,8-dimethyl-7-hydroxy-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 15 9a-butyl-8-chloro-7-hydroxy-4-methyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- (2*SR*,9a*SR*)-9a-butyl-2,4-dimethyl-7-hydroxy-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- (2*SR*,9a*RS*)-9a-butyl-2,4-dimethyl-7-hydroxy-2-propyl-1,2,9,9a-tetrahydro-3*H*-
- 20 fluoren-3-one;
- 9a-butyl-7-hydroxy-2,2,4-trimethyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- (2*SR*,9a*RS*)-9a-butyl-7-hydroxy-2-iodo-4-methyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-
- 25 one;
- (2*SR*,9a*RS*)-9a-butyl-2,7-dihydroxy-4-methyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- (2*RS*,9a*SR*)-9a-butyl-7-hydroxy-2-(2-hydroxyethyl)-4-methyl-1,2,9,9a-tetrahydro-3*H*-
- 30 fluoren-3-one;
- (2*SR*,9a*SR*)-2-allyl-9a-butyl-7-hydroxy-4-methyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;

(2*RS*,9*aSR*)-9*a*-butyl-7-hydroxy-2-(3-hydroxy-2-oxopropyl)-4-methyl-1,2,9,9*a*-tetrahydro-3*H*-fluoren-3-one;

5 (9*SR*,9*aSR*)-7-hydroxy-4-methyl-9-propyl-1,2,9,9*a*-tetrahydro-3*H*-fluoren-3-one;

9*a*-butyl-8-chloro-7-hydroxy-4-(trifluoromethyl)-1,2,9,9*a*-tetrahydro-3*H*-fluoren-3-one;

10 4-acetyl-9*a*-butyl-8-chloro-7-hydroxy-1,2,9,9*a*-tetrahydro-3*H*-fluoren-3-one;

9*a*-butyl-8-chloro-4-cyano-7-hydroxy-1,2,9,9*a*-tetrahydro-3*H*-fluoren-3-one;

9*a*-butyl-4-ethyl-6-fluoro-7-hydroxy-8-methyl-1,2,9,9*a*-tetrahydro-3*H*-fluoren-3-one;

15 9*a*-butyl-8-chloro-6-fluoro-7-hydroxy-4-methyl-1,2,9,9*a*-tetrahydro-3*H*-fluoren-3-one;

9*a*-butyl-8-chloro-4-ethyl-6-fluoro-7-hydroxy-1,2,9,9*a*-tetrahydro-3*H*-fluoren-3-one;

20 4-bromo-9*a*-butyl-8-chloro-6-fluoro-7-hydroxy-1,2,9,9*a*-tetrahydro-3*H*-fluoren-3-one;

9*a*-butyl-8-chloro-6-fluoro-7-hydroxy-4-(trifluoromethyl)-1,2,9,9*a*-tetrahydro-3*H*-fluoren-3-one;

25 2-hydroxy-5-methylgibba-1(10*a*),2,4,4*b*-tetraen-6-one;

4-bromo-9*a*-butyl-3-oxo-2,3,9,9*a*-1*H*-fluoren-7-yl pivalate;

7-hydroxy-4,9*a*-dimethyl-1,2,9,9*a*-tetrahydro-3*H*-fluoren-3-one;

30 9*a*-ethyl-7-hydroxy-4-methyl-1,2,9,9*a*-tetrahydro-3*H*-fluoren-3-one;

7-hydroxy-4-methyl-9*a*-propyl-1,2,9,9*a*-tetrahydro-3*H*-fluoren-3-one;

7-hydroxy-9*a*-isobutyl-4-methyl-1,2,9,9*a*-tetrahydro-3*H*-fluoren-3-one;



- 9a-butyl-4-ethyl-7-hydroxy-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 5 9a-butyl-7-hydroxy-4-propyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 4,9a-dibutyl-7-hydroxy-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 9a-butyl-4-chloro-7-hydroxy-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 10 9a-butyl-7-hydroxy-4-iodo-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 9a-butyl-7-hydroxy-4-trifluoromethyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 9a-butyl-7-hydroxy-4-phenyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 15 9a-butyl-4-(2-furyl)-7-hydroxy-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 7-hydroxy-9a-(3-iodopropyl)-4-methyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 20 7-hydroxy-4-methyl-9a-(2-methyl-1-propenyl)-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 9a-butyl-4-{4-[2-(dimethylamino)ethoxy]phenyl}-7-hydroxy-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one hydrochloride;
- 25 9a-butyl-4-{4-[2-(diethylamino)ethoxy]-phenyl}-7-hydroxy-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one hydrochloride;
- 9a-butyl-7-hydroxy-4-{4-[2-(1-pyrrolidinyl)ethoxy]phenyl}-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one hydrochloride;
- 30 9a-butyl-7-hydroxy-4-{4-[2-(4-morpholinyl)ethoxy]phenyl}-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one hydrochloride;

- 9a-butyl-4-{4-[3-(dimethylamino)propoxy]-phenyl}-7-hydroxy-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one hydrochloride;
- 9a-butyl-7-hydroxy-4-{4-[3-(1-piperidinyl)propoxy]phenyl}-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one hydrochloride;
- 5 (3*E*)-9a-butyl-7-hydroxy-4-methyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one *O*-methyloxime;
- 10 (2*SR*,9*aSR*)-9a-butyl-2-ethyl-7-hydroxy-4-methyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- (2*SR*,9*aSR*)-9a-butyl-7-hydroxy-2-propyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 15 (2*SR*,9*aSR*)-9a-butyl-7-hydroxy-4-methyl-2-propyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- (2*SR*,9*aSR*)-4,9a-dibutyl-7-hydroxy-2-propyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 20 (2*SR*,9*aSR*)-4-bromo-9a-butyl-7-hydroxy-2-propyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- (2*RS*,9*aSR*)-9a-butyl-7-hydroxy-2-(2-oxoethyl)-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 25 (2*SR*,9*aSR*)-2,9a-dibutyl-7-hydroxy-4-methyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- (2*RS*,9*aRS*)-9a-butyl-7-hydroxy-2,4-dimethyl-2-propyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 30 9a-butyl-7-hydroxy-2,2-dipropyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 9a-butyl-7-hydroxy-4-methyl-2,2-dipropyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;

- (2*SR*,9*aRS*)-9*a*-butyl-2,7-dihydroxy-4-methyl-2-propyl-1,2,9,9*a*-tetrahydro-3*H*-fluoren-3-one;
- 4-bromo-9*a*-butyl-2,2-diethyl-7-hydroxy-1,2,9,9*a*-tetrahydro-3*H*-fluoren-3-one;
- 5 (2*SR*,9*aSR*)-7-hydroxy-2,4,9*a*-trimethyl-1,2,9,9*a*-tetrahydro-3*H*-fluoren-3-one;
- (2*SR*,9*aSR*)-7-hydroxy-4,9*a*-dimethyl-2-propyl-1,2,9,9*a*-tetrahydro-3*H*-fluoren-3-one;
- 10 (2*SR*,9*aSR*)-9*a*-butyl-8-chloro-2-ethyl-7-hydroxy-4-methyl-1,2,9,9*a*-tetrahydro-3*H*-fluoren-3-one;
- 8-chloro-9*a*-ethyl-7-hydroxy-4-methyl-1,2,9,9*a*-tetrahydro-3*H*-fluoren-3-one;
- 15 8-bromo-9*a*-ethyl-7-hydroxy-4-methyl-1,2,9,9*a*-tetrahydro-3*H*-fluoren-3-one;
- 9*a*-ethyl-7-hydroxy-4,8-dimethyl-1,2,9,9*a*-tetrahydro-3*H*-fluoren-3-one;
- 8-chloro-7-hydroxy-4-methyl-9*a*-propyl-1,2,9,9*a*-tetrahydro-3*H*-fluoren-3-one;
- 20 8-bromo-7-hydroxy-4-methyl-9*a*-propyl-1,2,9,9*a*-tetrahydro-3*H*-fluoren-3-one;
- 7-hydroxy-4,8-dimethyl-9*a*-propyl-1,2,9,9*a*-tetrahydro-3*H*-fluoren-3-one;
- 25 8-chloro-7-hydroxy-4-methyl-9*a*-[(1*E*)-1-propenyl]-1,2,9,9*a*-tetrahydro-3*H*-fluoren-3-one;
- 8-bromo-9*a*-butyl-7-hydroxy-4-methyl-1,2,9,9*a*-tetrahydro-3*H*-fluoren-3-one;
- 30 9*a*-butyl-7-hydroxy-4,8-dimethyl-1,2,9,9*a*-tetrahydro-3*H*-fluoren-3-one;
- 9*a*-butyl-7-hydroxy-4-methyl-8-nitro-1,2,9,9*a*-tetrahydro-3*H*-fluoren-3-one;
- 8-amino-9*a*-butyl-7-hydroxy-4-methyl-1,2,9,9*a*-tetrahydro-3*H*-fluoren-3-one;

- 9a-butyl-7-hydroxy-4-(4-hydroxyphenyl)-8-methyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 5 9a-butyl-7-hydroxy-8-methyl-4-{4-[2-piperidinyl)-ethoxy]phenyl}-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 4-bromo-7-hydroxy-9a-propyl-1*H*-fluorene-3,9(2*H*,9a*H*)-dione;
- 10 4,8-dibromo-7-hydroxy-9a-propyl-1*H*-fluorene-3,9(2*H*,9a*H*)-dione;
- 4-bromo-9a-butyl-7-hydroxy-6-methyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 9a-butyl-8-chloro-4-methyl-3-oxo-2,3,9,9a-tetrahydro-1*H*-fluoren-7-yl pivalate;
- 15 9a-butyl-6,8-difluoro-7-hydroxy-4-methyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 9a-butyl-4-ethyl-6,8-difluoro-7-hydroxy-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 20 4-bromo-9a-butyl-6,8-difluoro-7-hydroxy-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 8-bromo-9a-butyl-4-chloro-8-difluoro-7-hydroxy-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 25 9a-butyl-4,8-dibromo-6-fluoro-7-hydroxy-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 9a-ethyl-6-fluoro-7-hydroxy-4-methyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 9a-ethyl-6,8-difluoro-7-hydroxy-4-methyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 30 8-chloro-9a-ethyl-6-fluoro-7-hydroxy-4-methyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 8-bromo-9a-ethyl-6-fluoro-7-hydroxy-4-methyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 9a-ethyl-6-fluoro-7-hydroxy-4,8-dimethyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;

- 4,9a-diethyl-6,8-difluoro-7-hydroxy-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 4-bromo-8-chloro-9a-ethyl-6-fluoro-7-hydroxy-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 5 4-bromo-8-chloro-9a-(cyclopentylmethyl)-6-fluoro-7-hydroxy-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 9a-ethyl-5-fluoro-7-hydroxy-4-methyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 10 8-bromo-9a-ethyl-5-fluoro-7-hydroxy-4-methyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 9a-ethyl-6,7-dihydroxy-4-methyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 15 8-bromo-9a-ethyl-6,7-dihydroxy-4-methyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 9a-ethyl-6-hydroxy-4-methyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 9a-ethyl-6-hydroxy-4-vinyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 20 4-allyl-9a-ethyl-6-hydroxy-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 2-hydroxy-5-methyl-7,8,9,10-tetrahydro-7,10a-methanocycloocta[*a*]inden-6(11*H*)-one;
- 25 7-amino-4-bromo-9a-butyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 7-amino-4,8-dibromo-9a-ethyl-1,2,9,9a-tetrahydro-3*H*-fluoren-3-one;
- 30 and the pharmaceutically acceptable salts thereof.;

7. A pharmaceutical composition comprising a compound according to Claim 1 and a pharmaceutically acceptable carrier.

8. A pharmaceutical composition made by combining a compound according to Claim 1 and a pharmaceutically acceptable carrier.

5 9. A process for making a pharmaceutical composition comprising combining a compound according to Claim 1 and a pharmaceutically acceptable carrier.

10 10. A method of eliciting an estrogen receptor modulating effect in a mammal in need thereof, comprising administering to the mammal a therapeutically effective amount of a compound according to Claim 1.

11. The method according to Claim 10 wherein the estrogen receptor modulation effect is an estrogen receptor antagonizing effect.

15 12. The method according to Claim 11 wherein the estrogen receptor antagonizing effect is an ER $\alpha$  receptor antagonizing effect.

20 13. The method according to Claim 11 wherein the estrogen receptor antagonizing effect is an ER $\beta$  receptor antagonizing effect.

14. The method according to Claim 11 wherein the estrogen receptor antagonizing effect is a mixed ER $\alpha$  and ER $\beta$  receptor antagonizing effect.

25 15. The method according to Claim 10 wherein the estrogen receptor modulation effect is an estrogen receptor agonizing effect.

16. The method according to Claim 15 wherein the estrogen receptor agonizing effect is an ER $\alpha$  receptor agonizing effect.

30 17. The method according to Claim 15 wherein the estrogen receptor agonizing effect is an ER $\beta$  receptor agonizing effect.

35 18. The method according to Claim 15 wherein the estrogen receptor agonizing effect is a mixed ER $\alpha$  and ER $\beta$  receptor agonizing effect.

19. A method of treating or preventing hot flashes in a mammal in need thereof by administering to the mammal a therapeutically effective amount of a compound according to Claim 1.

5 20. A method of treating or preventing anxiety in a mammal in need thereof by administering to the mammal a therapeutically effective amount of a compound according to Claim 1.

10 21. A method of treating or preventing depression in a mammal in need thereof by administering to the mammal a therapeutically effective amount of a compound according to Claim 1.

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